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ABSTRACT

This report describes the methods and findings of a study of the attitudes, values, and habits required for successful employment in technical-level positions. Part I describes the purpose and procedures of the study which sought to determine the feasibility of using the Affective Work Competencies Inventory (AWCI) to measure the affective competency of employed graduates from postsecondary institutions; and to determine employer attitudes regarding the skills and characteristics most important to successful employment. Part II begins by describing the modifications made to the AWCI to increase its applicability at the postsecondary level, and then discusses a pilot test of the instrument with a group of technicians as the primary data source, and offers conclusions about the reliability and usefulness of the AWCI. Next, findings are presented from a survey of 250 New York State employers which sought information on respondent/firm characteristics; the affective competencies related to success in hiring, retention, and promotion; and perceptions of recent hirees. Part III offers a concluding summary and discussion of implications. Appendices provide the AWCI in its original and modified forms and the employer survey form. (HB)

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AFFECTIVE WORK COMPETENCIES IN POSTSECONDARY OCCUPATIONAL EDUCATION: A FEASIBILITY STUDY

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SEPTEMBER 1984

Two-Year College Development Center
State University of New York at Albany

DATA SUMMARY SHEET:

AFFECTIVE COMPETENCIES FOR SUCCESSFUL EMPLOYMENT IN TECHNICAL LEVEL POSITIONS

Two-Year College Development Center
State University of New York at Albany

September 1984

The Two-Year College Development Center, State University of New York at Albany, in cooperation with the Bureau of Grants Administration, conducted a one-year study, Affective Work Competencies in Postsecondary Occupational Education: A Feasibility Study (VEA 53-84-9380). The research was undertaken to determine those affective characteristics (defined as those competencies other than specific technical skills) needed by employees to succeed in technical level positions, jobs that two-year college graduates would most likely fill.

Project staff used a questionnaire for collection of data from a sample of New York State employers that potentially could hire two-year college graduates as employees. The sample was selected from placement information provided by two-year colleges and Department of Commerce lists of major New York State employers. Usable responses were received from 43 employers.

A summary of findings and conclusions is presented herein. Detailed research results are available in the publication, "Final Report, Affective Work Competencies: A Feasibility Study, September 1984."

SUMMARY OF EMPLOYER SURVEY (N = 43)

I. Profile of Respondents

- •Male (57.9%), Female (42.1%)
- •Personnel officer (85.6%), Management (7.2%), College relations (4.8%), Other(2.4%)
- •Locations:

Nothern New York State	11.6%
Western New York State	23.2%
Eastern New York State	16.3%
Central New York State	39.5%
Downstate	9.4%

- •Number of employees:

under 100	4.8%
100 - 499	34.2%
500 - 999	24.4%
1000 - 1999	17.2%
2000 - 5000	14.6%
over 5000	4.8%

- •Company type:

Manufacturing	60.8%
Services	15.2%
Retailing	8.7%
Financial	6.5%
Research & Development	6.5%
Agriculture	2.3%

II. Most Requently Identified Affective Competencies Necessary for Successful Employment

- •Hiring characteristics:
  - —enthusiasm/motivation/interest (46.5%)
  - —communication skill (34.9%)
  - —appearance (27.9%)
  - —interpersonal skills (27.9%)
  - —ability/skill match to job (25.6%)
  - —attitude (23.3%)
  - —maturity/self-confidence (23.3%)
- •Retention characteristics:
  - —quality of performance/productivity (53.9%)
  - —dependability (39.5%)
  - —adaptability/versatility (37.2%)
  - —seniority (34.9%)
  - —self-directedness (23.3%)
- •Promotion characteristics:
  - —performance/achievement (86.0%)
  - —ambition/self-directedness (48.8%)
  - —aggressiveness/creativity (48.8%)
  - —interpersonal skill/tact (34.9%)
  - —leadership/decision-making skill (18.6%)
  - —loyalty/dedication (18.6%)
  - —communication skills (18.6%)
- •Competencies common to hiring, retaining and promotion:
  - —motivation
  - —communication
  - —job performance/history
  - —interpersonal skill
  - —maturity
  - —attitude

III. Perception of New Employees

- •Descriptors of ideal new technicians:
  - —motivated (48.8%)
  - —pleasant personality (34.9%)
  - —enthusiastic (27.9%)
  - —dependable (25.5%)
  - —communicative (23.6%)
  - —competent (23.6%)
- •Major complaints of new technicians:
  - —unrealistic expectations (41.9%)
  - —over-confidence (41.9%)
  - —lack of human relations skills (18.6%)
  - —poor communicative skills (18.6%)
  - —inflexible (6.9%)
  - —lack of long-term career goals (6.9%)

IV. Conclusions

- •A core of six affective competencies necessary for employment success (hire, retain, promote) were identified by a majority of employer respondents: motivation, performance, communicative, interpersonal skill, maturity and attitude.
- •In contrast, from another data source, some employees view education and experience as most critical to employment success.
- •Descriptors of the ideal new worker reflect the six core affective competencies.
- •Postsecondary educators may wish to incorporate appropriate aspects of the affective competencies into instructional programs to further enhance employment success of career graduates.

A SUMMARY:

AFFECTIVE WORK COMPETENCIES IN POSTSECONDARY OCCUPATIONAL EDUCATION: A FEASIBILITY STUDY

(VEA 58-84-9380)

Project Staff

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in cooperation with

Bureau of Grants Administration
State Education Department

SEPTEMBER 1984

INTRODUCTION

This publication is abstracted from the final report entitled "Affective Work Competencies in Postsecondary Occupational Education: A Feasibility Study" (VEA 58-84-9380), Two-Year College Development Center, State University of New York at Albany, September 1984. If the reader is interested in greater detail or application/consideration of materials, the complete report and instrument used in the study are available upon request from project staff.

Funding for this project was provided under
PL 94-482 Title II, Vocational Education, Subpart 3
Education Amendments of 1976
Administered by
New York State Education Department

DATA SUMMARY:

AFFECTIVE WORK COMPETENCIES IN POSTSECONDARY OCCUPATIONAL EDUCATION: A FEASIBILITY STUDY

The Two-Year College Development Center, State University of New York at Albany, in cooperation with the Bureau of Grants Administration, conducted a one-year project, Affective Work Competencies in Postsecondary Occupational Education: A Feasibility Study (VEA 53-84-9380). Affective characteristics were defined as those competencies other than specific technical skills needed by employees to succeed in technical level positions, jobs that two-year college graduates would most likely fill. The research was undertaken with two purposes: a) determining the applicability of the Affective Work Competencies Inventory for use at the postsecondary level, and b) to determine affective characteristic/competencies critical to employment success, in particular to hiring, retaining and promotion processes.

Applicability of Inventory

As a result of consultations with project ad hoc advisors, the original Affective Work Competencies Inventory (developed for use at secondary level) was revised to reduce the number of items and eliminate those items found inappropriate to technical employees. Revisions were based on input by employers, two-year college personnel, and a test and measurement consultant. The revised version of the instrument was used in a pilot study with technicians as primary data source. This effort resulted in data for selected analysis of the instrument (correlations, frequencies and descriptive statistics using SPSS). Based on these analyses, the following results are reported:

- *The 26 items constituting the revised version may serve as a preliminary base for evaluating affective characteristics since they appear to be tapping behaviors associated with successful employment.*

- *Based on available data some degree of reliability can be anticipated.*
- *Based on the extent of significant inter-item and inter-cluster correlations, it is recommended that the instrument not be considered in an item-cluster structure since clusters offer little discrimination.*
- *It is recommended that consideration be given to reduction of scale range in any future efforts.*
- *Based on mean and median, it appears that punctuality, safety, responsibility, pride and helping others are associated with employee success to a greater extent than items dealing with awareness of the workplace and planning skill development.*

Employer Identification of Competencies

In order to obtain employer input regarding those affective characteristics essential to hiring, retaining and promoting, a mail survey to a sample of employers likely to hire two-year college graduates was undertaken.

A questionnaire was used for collection of data from New York State employers that potentially could hire two-year college graduates as employees. The sample was selected from placement information provided by two-year colleges and Department of Commerce lists of major New York State employers. Usable responses were received from 43 employers. Data analysis included frequency distributions and percentages.

Survey results indicated that when hiring technical level employees, the most wanted affective characteristics were motivation, interest and enthusiasm; followed closely by skills in communication, appearance, an apparent awareness of others, and necessary knowledge/skills to match job requirements.

For continued employment consideration (as opposed to hiring), critical affective competencies included quality of job performance, productivity, dependability, reliability, and continued motivation/enthusiasm. Flexibility, versatility and ability to learn were also important to retention decisions. Seniority or length of time in the

position were considered factors even though it was acknowledged that this criterion was not an affective characteristic.

When promotion was being considered, job performance, accomplishment, achievement, knowledge and ability were viewed most essential. Continued motivation and ambition coupled with a potential for growth, creativity, aggressiveness, functioning under stress, interpersonal skills, tact and functioning as a team member were also important promotional criteria.

When viewing the three procedures and identified characteristics within each, motivation, communication skills, job performance, interpersonal skills, maturity and attitude are isolated as six affective competencies necessary for successful employment in a technical level position. These six competencies compare favorably to those identified in other states and in other research studies. As with other studies no attempt was made to reach a specific definition of terms but rather accept the common usage definition. The five adjectives describing an ideal new employee--motivation, pleasant personality, enthusiasm, dependability, communicativeness and competency--again reflected the six competencies.

Although the data source did not allow specific comparisons of employee and employer perceptions of needed affective skills, an informal comparison indicated that employees are more likely to identify experience and education as critical to employment success than are employers.

Summary and Implications

Postsecondary occupational educators may find interest in considering the employer-desired affective competencies and determine how they might relate to instructional program components. Many of the identified skills reflect those currently under consideration as part of the futuring process, thus over time, should gain greater emphasis as the effort is broadened.

Meanwhile, daily instructional processes may emphasize activities that are designed to increase the ability of students to interact with others and assume responsibilities toward study found most challenging by each individual.

In general, the Affective Work Competency Inventory as originally designed appears to encompass an appropriate domain of items for technical workers. However, the format does not appear usable and in many instances unacceptable, to distribution and use through an employer. An instrument designed to test affective competencies needs to be less lengthy, and use no items that may place an employer or employee in a position of requesting assessment not based on evidence of performance or evidence required by the employing agency. There is apparently little difficulty obtaining information and reactions regarding skills or competencies as long as the information is not linked to individual employees. Because of union and agency policies, assessments linked with employees are not readily shared, perhaps not shared at all to an outside agency, without careful planning and thorough understanding of purpose--a procedure beyond the scope of this project.

If interest in development of an instrument to measure affective dimensions should continue, it appears from responses received that the design of such an instrument would be possible if the effort was extensive, allowing for a period of time to carefully build rapport with and gain the trust of any agency asked to participate. Such an effort would need to be more extensive than this feasibility study. The experience of this effort has indicated that the premise of using an already developed instrument should not be anticipated as a viable strategy.

An alternate approach might be to seek input from potential technologists prior to graduation leading toward the eventuality of contacting them directly once employed. There is some sense from previous experiences that if

employees accept the research agency prior to graduation, they remain willing to provide feedback requested. This would eliminate the necessity of going through an employing agency functioning within organizational and union policies. However, this direct alternative eliminates the potential of obtaining employer input thereby resulting in but half of the data sought.

AFFECTIVE WORK COMPETENCIES

IN POSTSECONDARY OCCUPATIONAL EDUCATION:

A FEASIBILITY STUDY

(VEA 58-84-9380)

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SEPTEMBER 1984

Organization of Report

This document consists of three major parts plus appendices. Part I introduces the study, identifies purpose and outlines methodology. Part II is divided into three sections. Section A summarizes and discusses data derived from determining the feasibility of using an instrument previously developed for secondary occupational graduates to measure affective competencies of employed postsecondary graduates. Section B summarizes and discusses data collected from a sample of employers to determine affective characteristics most closely related to successful employment. Section C summarizes employee perspectives in light of employer input. Part III serves as a concluding summary and discussion of implications, and is recommended to readers who seek an overview of major highlights.

Funding for this project was provided under
PL 94-482 Title II, Vocational Education, Subpart 3
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AFFECTIVE WORK COMPETENCIES IN POSTSECONDARY OCCUPATIONAL EDUCATION:

A FEASIBILITY STUDY

I. Introduction, Purpose and Procedures

The concern that occupational education graduates are prepared for productive participation in the labor force is rooted in the legislation of the Education Amendments of 1976. The extent to which new employees exhibit relevant knowledges and skills to the satisfaction of their employers is specified as an evaluation criterion in PL 94-482 (20 USC 2391). But job performance is a complex construct, requiring measure not only of technical knowledge but attitudinal or affective traits as well (McKinney, Gray & Abram, 1978; Smith & Brouwer, 1977).

Further, the advances of technology are changing the occupational structure of our society from producing goods to providing services--a "technological revolution." New York State has been described as

> moving from economic growth based upon its capacity to process materials to economic growth based upon its capacity to process information. Manufacturing, trade, construction and mining are declining, while services, finance, communications and technology-related jobs...hold the key to the...future. (Curriculum Recommendations, New York State Education Department, 1983).

Thus, machines are completing many psychomotor activities once performed by the workers, and an increasing number of workers are providing services for other people as well as machines. Many now find early obsolescence of specific job skills or knowledges, and a work environment that increasingly values proper work habits and attitudes (Cleek, 1981; Beach, 1979; NYSED, 1983).

Vocational educators are particularly concerned in order to help students better understand expectations and their own behavior under varying conditions

in the work place. A component of this behavior is evaluation based. Approved behavior in the work place can be generally defined as positive affective work competency which includes desired attitudes, values and habits which are increasingly important as vocational survival skills.

Because of the interest in affective skills some states have identified those characteristics desirable for successful employment. Oklahoma (1983) sets the following: confidence, perseverance, comprehension, initiative, reliability, tact, loyalty, enthusiasm, cooperation, adaptability, safety-consciousness, housekeeping, oral experssion, sociable, grooming, leadership and poise.

Arizona (1983) has labeled similar skills as responsibility skills essential for success in entry level positions: punctuality, dependability, getting along with others, being neat and clean in appearance, giving an honest day's work, loyalty to the organization, and following instructions. Desirable characteristics for continuing employment were identified as working as a team member, understanding written information, maintaining good health, knowledge of one's strengths and weaknesses, using initiative and imagination, possessing information, working without close supervision, working under pressure, adjusting to work situations, managing time and materials effectively and following safety regulations. The willingness to learn and to work were seen as basic essentials for any position.

The U.S. Department of Labor has identified work maturity skills including: present a positive image, exhibit positive work habits, practice good work habits, practice ethical behavior, communicate effectively, accept responsibility, and cooperate with others.

Researchers have recently identified 10 areas of functional knowledge as necessary for mastering success in the work world. These areas include among others: knowledge of written and oral communication, ability to look at and define problems objectively, appreciation of life-long learning, an intellectual integrity with flexible realistic goals, and an appreciation of the working environment.

Thus literature is repleat with identification of affective skills that a worker should acquire in order to help assure employment success. This study examined affective characteristics in relation to technical level positions---those jobs likely to be held by two-year college graduates.

Purpose of Study and Rationale

This study was undertaken with two major purposes:

1) to determine the feasibility of using an instrument previously developed for secondary occupational graduates with employed graduates from postsecondary institutions as a measure of affective competency

2) to determine which affective skills or characteristics are most important to successful employment at the technical level.

For the purposes of this research, affective work competencies were defined as those skills other than specific technical skills that are needed by employees to succeed---those attitudes, values and habits required for successful employment.

Toward achieving the stated purposes, this study drew from a previous work (Kazanas, Beach and others) in which a series of intensive related research studies identified a set of affective work competencies for graduates of secondary occupational programs. The rationale used by the developers was that affective competencies are manifested in behaviors demonstrated by employees,

and thus can be evaluated in terms of these behaviors. Their work resulted in a measure of affective competencies, the Affective Work Competencies Inventory.

This feasibility effort was concerned with the extent to which clusters and items comprising the Affective Work Competencies Inventory were generalizable to the postsecondary or technical level.

Methodology and Procedures

In the effort to address the major concerns of this research and to achieve the stated objectives the following procedures were undertaken. Results and implications to the study are discussed in subsequent sections of this report.

- The initial activity was completion of an ERIC search of the current literature. The purpose of this search was to identify other articles related to the work of the authors and applications of the AWCI.
- Telephone consultations and letter contacts were held with the author for the purpose of acquiring more detail concerning development and analyses of the instrument plus permission to use the AWCI if appropriate.
- Employers, two-year college personnel and a test/measurement specialist were selected to serve as ad hoc advisors and consultants. Their role was perceived as providing input, reactions, suggestions and questions throughout the project. Too, their advice and support was viewed as crucial in any use, adaption, or application of the AWCI.
- Consultations, meetings, mail contact and telephone discussions with the ad hoc advisors were held as appropriate. The specific purpose of these interactions was to obtain recommendations as to the useability of the AWCI from their respective perspectives.
- The sources of data were identified as a sample of technical level

employees and a sample of employers with potential of hiring two-year college graduates.

- Collection of data procedures were to include the use of a questionnaire, the AWCI and interviews.
- Data analyses were to include means, standard deviations, standard error of measurement, median, range and Pearson correlation matricies (SPSS). Frequency and frequency percentages were also to be computed.

II. Data Results and Discussions

A. The Instrument

Discussion of procedures and results are categorized by general purpose and specific research objectives. One purpose was to determine the feasibility of using an instrument previously developed for secondary occupational graduates to measure affective work competencies/characteristics of employed postsecondary graduates. This purpose addressed the following specific objective:

- to cooperatively adapt and test an instrument that will identify affective work characteristics/competencies which are associated with selected technical positions.

The proposed instrument, entitled Affective Work Competencies Inventory (AWCI), was developed by Drs. Kazanas, Beach and others. The AWCI was orginally selected because of the rationale upon which the instrument was based, and the reported research of its development. The basic premise of the AWCI was that affective competencies can be effectively judged if manifested in work behaviors. Based on this rationale, work behaviors were set forth in 95 items using the format of a 7-point self-rating scale.

Reported scope of research preceding actual development of the instrument summarized a process by which employers and educators worked in concert to identify behaviors and fomulate items. The application of the instrument was extensive suggesting potential useability of the instrument at the postsecondary level. An ERIC search was undertaken to determine the existence of additional articles reporting work with the AWCI. Simultaneously letter contact was made with one author, Dr. David Beach, Indiana State University. It carried a request for permission to use the AWCI, plus additional information regarding analyses undertaken to establish reliability and validity. Subsequently telephone consultations were held with Dr. Beach. As a result additional materials

were shared including instrument analyses, supervisor forms, scoring and administration guidelines. The instrument (AWCI) and supervisor form are attached as Appendix A.

Once received, these materials were the basis for a series of consultations with Dr. Reuben Rusch, State University of New York at Albany (tests and measurement advisor). These discussions focused on the instrument.

AWCI was orginally developed using a cluster-item design. Because of the number of items (95) there were several considerations given to reduction of clusters and/or items if warranted by statistical analyses. Unfortunately, correlations necessary to warrant such decisions were not available. It was unclear whether or which, items or clusters, were measuring the same domain thus could potentially be eliminated if inappropriate to current research concerns.

As an alternative, input was sought from selected employers and two-year college personnel serving as ad hoc advisors, as to the feasibility of using AWCI with only minor revisions to demographic items plus a newly developed supervisor form. A cover letter explaining purpose and requesting feedback plus copies of instruments were mailed to General Electric in Schenectady, Smith-Corona in Cortland and four two-year institutions (Placement/Institutional Research Directors at Broome Community College, Delhi Agricultural and Technical College, Canton Agricultural and Technical College, and Dutchess Community College).

The feedback was largely negative or negative by its nonexistence. The unfavorable reactions were rooted in the format of the Inventory, and information sought by many of the items. Employers indicated that they were reluctant to ask employees to respond to the instrument given organizational policies. The general consensus was that AWCI in its orginal 95-item format, was too lengthy

and inappropriate as a tool for use at the technical level. Employers strongly recommended that any instrument distributed through an employing agency ask only questions for which there was evidence of performance leading to judgments. Employers did identify 26 items from the 95 which were viewed as somewhat appropriate and might not cause undue concern. Based on their input, project staff revised the original instrument into a short form with items and clustering maintained from the original (Appendix B).

Project staff developed an employer form designed to collect data regarding affective competencies as related to the hiring, retaining and promotion of successful technical level employees without linking such data to individual employees (Appendix C).

Smith-Corona agreed to serve as a site for a limited pilot effort on the condition that employee responses to the short form of AWCI were mailed directly to project staff and remained anonymous. Supervisors were asked to respond to the employer form to help identify the characteristics of successful employees without relating responses to individual employees. The over-all employee response rate was 54% for a total of 15 useable responses.

The purpose of the pilot study was to determine the useability of a short form of the AWCI, as well as to field-test the employer questionnaire. (Employer responses from the pilot study were aggregated with survey responses discussed in a subsequent section.) Any results subsequently reported regarding the AWCI Short Form must be interpreted with caution since analyses are based only on a limited pilot study. Findings should be viewed in relation to this effort only.

Figure 1 summarizes means for standard deviation, standard error of measurement, median and range for each AWCI item. Although a seven-point scale was given, the range of responses clustered from points 2 through 4. An exception, item 7 (report unsafe working conditions) showed a range of 6. The 25 remaining

Figure 1

Summary of Item Analysis: AWCI Short Form

Item	Mean	Standard Deviation	Standard Error of Measurement	Median	Range
While at work, I:					
1. Develop new skills to get promoted.	4.4	.986	.254	4.5	4.0
2. Make changes so I don't make mistakes.	5.5	1.158	.309	5.7	4.0
3. Make decisions without help.	5.4	.834	.215	5.5	3.0
4. Check my work to be sure its right.	5.9	1.100	.284	6.0	4.0
5. Follow all directions step by step.	5.3	1.397	.361	5.6	4.0
6. Follow safety rules.	6.0	1.100	.284	6.3	3.0
7. Report unsafe working conditions.	5.3	1.839	.475	5.6	6.0
8. Look at all sides of a problem.	5.8	1.146	.296	5.8	4.0
9. Plan my work for the day.	4.9	1.280	.330	4.8	4.0
10. Put equipment and materials back where they belong.	5.6	1.291	.333	5.8	4.0
11. Am proud of the work I do.	6.2	.941	.243	6.5	2.0
12. Set my own work goals.	5.8	.915	.236	5.9	3.0

Item	Mean	Standard Deviation	Standard Error of Measurement	Median	Range
13. Complete what I start.	6.0	.594	.153	6.0	2.0
14. Start work on time.	6.5	.834	.215	6.7	3.0
15. Suggest how to save time/ effort.	5.7	1.129	.304	5.9	3.0
16. Adjust to various work situations.	5.6	.900	.232	5.8	3.0
17. Work without supervision.	5.7	1.033	.267	5.8	4.0
18. Keep good and complete records.	5.4	1.060	.274	5.4	3.0
19. Listen to instruction.	5.7	.704	.182	5.7	2.0
20. Take care of equipment and leave workplace neat.	5.4	1.187	.307	5.3	3.0
21. Help others when they need it.	6.2	.862	.223	6.2	3.0
22. Finish my work on time.	5.7	.611	.163	5.7	2.0
23. Keep my records and files in order.	5.4	1.356	.350	5.8	4.0
24. Keep my supplies in order.	5.0	1.254	.324	5.0	4.0
25. Look forward to new assingments.	5.8	1.125	.291	6.0	3.0
26. Help new workers.	6.2	.799	.206	6.4	2.0

items ranged 2, 3, or 4; 10 a range of 4, 10 a range of 3, and 5 a range of 2.

The means for each item were in the positive direction, that is, toward "always." The items which netted a mean of 6 or higher included:

#6---follow safety rules (6.0)

#11---am proud of the work I do (6.2)

#13---complete what I start (6.0)

#14---start work on time (6.5)

#21---help others when they need it (6.2)

#26---help new workers (6.2)

Those items receiving a mean of less than 5 included:

#1---develop new skills to get promoted (4.4)

#9---plan my work for the day (4.9)

Twenty-five of the 26 items show a median of 5 or higher, further indicating use of the upper or positive ranges of the scale.

The standard deviation is $>$ 1 for 15 of the 25 items (#2, 4, 5, 6, 7, 8, 9, 10, 15, 17, 18, 20, 23, 24, 25). The remaining 11 items each show a standard deviation of $<$ 1. The highest standard error of measurement (.361) is shown for #5 (follow all directions step-by-step).

To determine the useability of an item, it was hypothesized that if an item by itself was effective, than multiple items drawn from the same cluster should serve as a better measurement. An average rating was determined for items within a cluster (Figure 2). All but two items averaged 5.0 to 5.9. Cluster 1 had a mean of 4.9, #2 a mean of 6.1. With averaging the maximum range level dropped to 5. Five clusters showed a range of 2, 4 a range of 3, 2 a range of 4, and 1 a range of 5. (Two clusters were one-item clusters.)

Medians reflected means for all but 2 items, with a range of 5.0 to 5.9.

Figure 2

Summary of Cluster-Item Average Analysis: AWCI Short Form

Cluster	Mean	Standard Deviation	Standard Error of Measurement	Median	Range
1. (average-items 1 & 10)	4.9	.799	.206	4.9	2.0
2. (average-items 21 & 26)	6.1	.640	.165	6.1	2.0
3. (average-items 2 & 16)	5.5	1.060	.274	5.7	4.0
4. (average-items 3 & 17)	5.4	.737	.190	5.5	2.0
5. (average-items 4 & 18)	5.6	.910	.235	5.4	3.0
6. (average-items 5 & 19)	5.4	.915	.236	5.6	3.0
7. (average-items 6 & 7)	5.5	1.457	.376	5.8	5.0
10. (average-items 13 & 23)	5.6	.828	.214	5.5	3.0
11. (average-items 12 & 24)	5.2	.704	.182	5.2	2.0
12. (average-items 14 & 22)	5.8	.561	.145	5.8	2.0
13. (average-items 9 & 15)	5.0	1.100	.284	5.1	4.0

14.	(average-items 11 & 25)	5.8	.990	.256	5.8	3.0

Original Cluster 6 - out

Clusters 8, 9 - 1 item only

The exceptions were item 1 with a median of 4.9 and item 2 with 6.1.

Standard deviations of the cluster-item averages resulted in 3 $>$ 1. The average of items 6 and 7 showed the highest standard error of measurement (3.76) and included the highest SEM of individual items.

Figure 3 summarizes the frequency of response for each of the seven points on an item-by-item basis. Shown by frequency and frequency percentage, ratings of 4, 5, 6, 7 (the positive end of the scale) were used almost to the exclusion of the lower (negative) direction of the scale. The rating of 3 was selected in a few instances---a frequency of 2 for items 9, 23, and 24.

An intercluster correlation matrix was completed to examine the relatedness of items within a cluster (Figure 4). As shown, items 6 (follow safety rules) and 7 (report unsafe working conditions) correlate at a significant level (.001). Near significance (.08) was attained by items in clusters 12 and 15. In cluster 12, items 12 (set my own work goals) and 24 (keep my supplies in order) are negatively correlated. In cluster 14, items 9 (plan my work for the day) and 15 (suggest how to save time and effort) are positively related.

A Pearson inter-item correlation matrix was also completed. Those items that showed significant correlations are shown in Figure 5. In the same figure, the significance level of correlation for items within the same cluster are also identified. These data indicate that intercorrelations occur among many of the 26 items but significant correlations occur more frequently outside the cluster. There are 62 instances of significant correlation among items not within a cluster compared to 2 among items within a cluster.

To further determine the extent to which any one cluster discriminates or measures a unique dimension, Figure 6 identifies those intercluster correlations that reached a minimum level of significance (.05)---18 significant pairings.

Figure 3

Frequency Summary: Item by Rating

	Rating													
	1		2		3		4		5		6		7	
Item	F	F%	F	F%	F	F%	F	F%	F	F%	F	F%	F	F%
1	-	-	1	6.7	1	6.7	5	33.3	7	46.7	1	6.7	-	-
2	-	-	-	-	1	7.1	1	7.1	4	28.6	5	35.7	3	21.4
3	-	-	-	-	-	-	2	13.3	5	33.3	7	46.7	1	6.7
4	-	-	-	-	1	6.7	-	-	3	20.0	6	40.0	5	33.3
5	-	-	-	-	1	6.7	5	33.3	1	6.7	4	26.7	4	26.7
6	-	-	-	-	-	-	2	13.3	2	13.3	4	26.7	7	46.7
7	1	6.7	1	6.7	-	-	1	6.7	4	26.7	6	20.0	5	33.3
8	-	-	-	-	1	6.7	-	-	5	33.3	4	26.7	5	33.3
9	-	-	-	-	2	13.3	4	26.7	4	26.7	3	20.0	2	13.3
10	-	-	-	-	1	6.7	2	13.3	3	20.0	4	26.7	5	33.3
11	-	-	-	-	-	-	-	-	5	33.3	2	13.3	8	53.3
12	-	-	-	-	-	-	1	6.7	4	26.7	6	40.0	4	26.7
13	-	-	-	-	-	-	-	-	2	13.3	10	66.7	3	20.0
14	-	-	-	-	-	-	1	6.7	-	-	4	26.7	10	66.7
15	-	-	-	-	-	-	3	21.4	2	14.3	5	35.7	4	28.6
16	-	-	-	-	-	-	2	13.3	3	20.0	8	53.3	2	13.3
17	-	-	-	-	1	6.7	-	-	4	26.7	7	46.7	3	20.0
18	-	-	-	-	-	-	3	20.0	5	33.3	4	26.7	3	20.0
19	-	-	-	-	-	-	-	-	6	40.0	7	46.7	2	13.3
20	-	-	-	-	-	-	4	26.7	4	26.7	3	20.0	4	26.7
21	-	-	-	-	-	-	1	6.7	1	6.7	7	46.7	6	40.0
22	-	-	-	-	-	-	-	-	5	35.7	8	57.1	1	7.1
23	-	-	-	-	2	13.3	2	13.3	1	6.7	7	46.7	3	20.0
24	-	-	-	-	2	13.3	3	20.0	5	33.3	3	20.0	2	13.3
25	-	-	-	-	-	-	2	13.3	4	26.7	3	20.0	6	40.0
26	-	-	-	-	-	-	-	-	3	20.0	5	33.3	7	46.7

Figure 4

Item Correlation Within Cluster

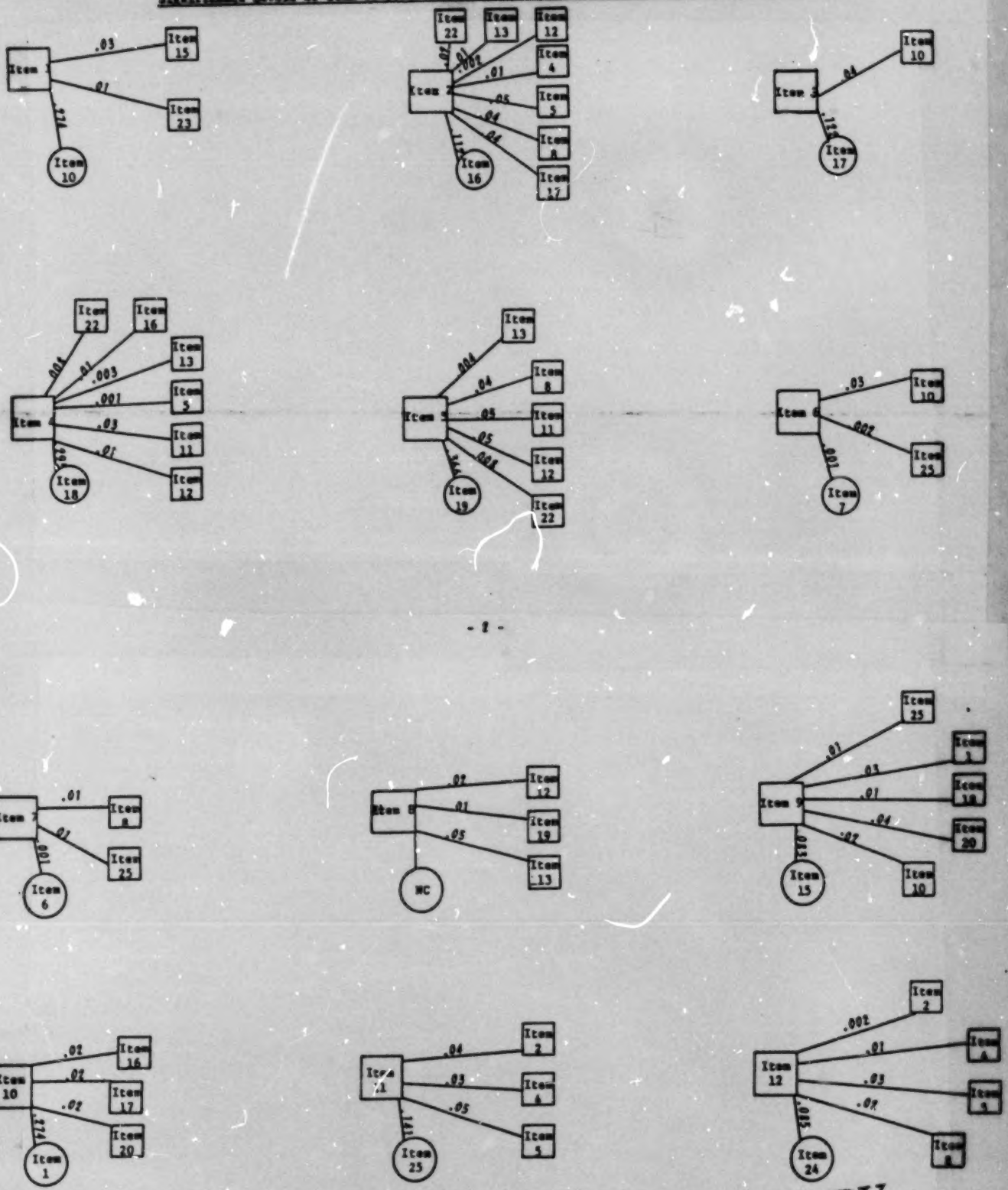
Cluster	Items	Correlation Coefficient	Level of Significance
1	1, 10	-.1684	.274
2	21, 26	.0207	.471
3	2, 16	.3474	.112
4	3, 17	.3207	.122
5	4, 18	.1511	.295
7	5, 19	.0969	.366
8	6, 7	.7300	.001***
11	13, 23	-.0414	.442
12	12, 24	-.3734	.085
13	14,22	-.1056	.360
14	9, 15	.3924	.083
15	11, 25	.2967	.141

Orignial Cluster 6 dropped

Cluster 9 & 10 consist of 1 item

Figure 3

Significance Levels of Item to Item Intercorrelations as Compared to Cluster Item Intracorrelations



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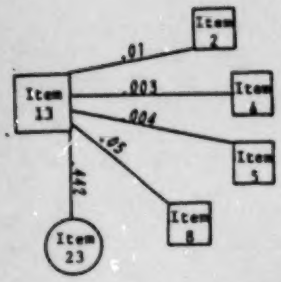
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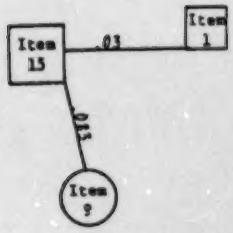
Item 6
Item 5
Item 8
Item 23
.01
.003
.004
.05
.442

Item 14
Item 22
.560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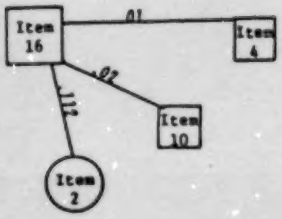
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Item 10
Item 2
.01
.02
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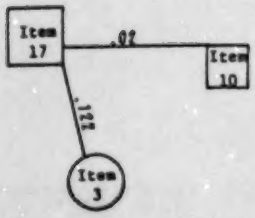
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Item 3
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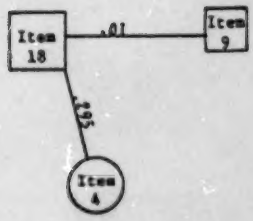
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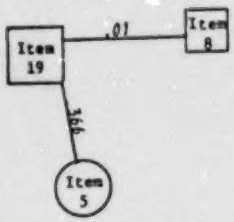
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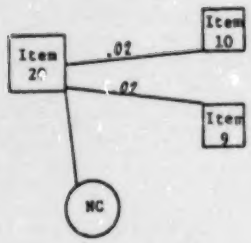
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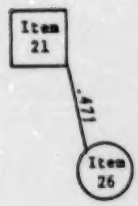
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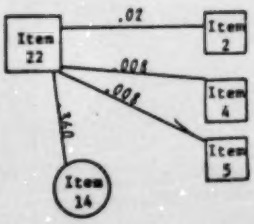
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Item 5
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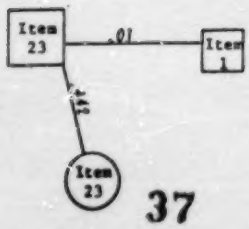
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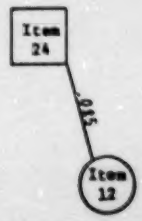
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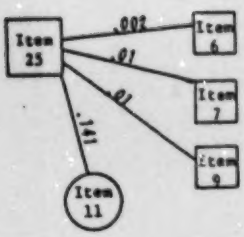

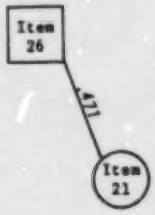

- Items with significant correlations

- Items within cluster

NC - Non-cluster with one item only

Figure 6

Inter-Cluster Correlations: $>$.05 Minimum Level of Significance

Clusters	Correlation Coefficient	Level of Significance
1, 8	.6377	.005
3, 4	.4390	.051
3, 5	.4589	.043
3, 6	.5348	.020
3, 9	.5055	.027
4, 14	.4698	.039
5, 6	.7543	.001
5, 10	.5307	.021
5, 13	.5280	.022
6, 7	.5348	.020
6, 9	.6397	.005
7, 9	.5814	.011
7, 11	.5479	.017
7, 14	.4982	.029
8, 12	.4722	.038
10, 13	.6588	.004
11, 14	.4646	.041
12, 13	.4866	.033

Implications of Data Results. The following statements are based on data analysis of responses collected in the pilot study using the short-form of the AWCI. These results may be a function of the limited number of responses (N = 15) or of the reduction of items, and should be interpreted accordingly:

1. Items selected for the short-form instrument appear to be credible items, tapping behaviors indicative of necessary affective competencies for successful employment. These 26 items could be considered as a preliminary base of affective characteristics critical to technical employee effectiveness.
2. Based on means and medians, those items dealing with punctuality, safety, responsibility, pride and helping others are associated by employees to job success to a greater extent than those items dealing with awareness of the workplace and planning/skill development.
3. Item analysis (standard error of measurement) suggests some degree of reliability for the instrument. Due to administrative constraints of the pilot effort the opportunity for additional reliability activities were not possible. If the SEM are taken at face value, the chance that the same employees would respond in a similar manner may exist.
4. Based on the high incidence of significant levels of inter-item correlations, the short-form instrument should not be viewed in an item within cluster structure. Rather these analyses suggest that items are closely related to one another, and are overlapping in what they measure.

The designation of clusters does not provide discrimination in the short form. This may be a function of the number of responses, or the procedure used in the selection of the items for the short form. However, since original correlation matrices were not available, there is no evidence on which to base a conclusion as to whether differences in the correlation profile do exist between the original and short-form instrument.

5. Although a seven-point scale was provided, respondents tended to reduce the scope of the scale to five points. If an opportunity existed for further work or expansion of the pilot study, serious consideration should be given to the most effective scale range.

B. Employer Survey

The second major purpose of this feasibility study was to determine those affective characteristics which are most closely related with successful employment. This purpose is reflected in following specific project objectives:

- To determine which competencies/characteristics are used by employers in making decisions to hire, retain and/or promote employees.
- To determine those competencies most related to success in technical positions.
- To determine similarities and differences between employees and employers in their perception of important characteristics.

The alternate procedure used to collect these data was a survey to a sample of employers in New York State with technical positions and the potential of hiring two-year college graduates. The instrument used to collect these data was the same questionnaire used with employers in the pilot study with minor

revisions.

Employers were identified from three sources: (1) the two-year colleges themselves as they reported placement in another project[1], (2) the listing of employers provided in response to the current project, and (3) the Department of Commerce listing of major employers in New York State. Since the Department of Commerce listing was comprehensive and statewide, it was used as the basis for selecting a sample to assure that employers from all geographical areas of New York State were contacted as well as employers representing a range of fields. Because individual names were not available, and in some instances addresses appeared incomplete, a greater number (250+) was identified to enhance the potential response of a representative sample of employers. Useable responses were received from 43 employers; 16 were returned as "out of business" or "no longer at address." The useable response rate stands at 16.4%.

Respondents are profiled in Figure 7. As shown, the gender of respondents is somewhat evenly divided. Geographic locations of respondents represent a cross-section of the five geographical areas of the state. The greatest number of responses was received from Central New York State, followed by Western New York State. The majority of respondents represented companies engaged in manufacturing (60.8%), with services following as the second most frequent (15.2%). Less frequent responses were received from retailing, financial, research and development and agricultural employers.

Relative to size, responding employers ranged from over 7,000 employees to less than 5. Respondents were most frequently from agencies employing 100 to 500 employees.

---

[1] Geographic Mobility - Postsecondary Occupational Education Graduates, Albany, NY: Two-Year College Development Center, State University of New York at Albany, September 1983.

Figure 7

Profile of Respondents

Gender of respondents:

Male	57.9%
Female	42.1%

Geographical location:

Northern New York State	11.6%
Western New York State	23.2%
Eastern New York State	16.3%
Central New York State	39.5%
Downstate	9.4%

Type of company:

Manufacturing	60.8%
Services	15.2%
Retailing	8.7%
Financial	6.5%
Research and Development	6.5%
Agriculture	2.3%

Number of employees:

Over 5,000	4.8%
2,000 - 5,000	14.6%
1,000 - 1,999	17.2%
500 - 999	24.4%
100 - 499	34.2%
under 100	4.8%

N = 43

It was originally proposed that affective characteristics be identified for business and technologies only. Since an alternate methodology was employed and the complete AWCI not used as orginally intended, the employer survey was not limited to a particular area. It was anticipated that the responses would reflect the business and technological areas to a greater extent than other areas by virtue of greater numbers. Respondents can be categorized by comparable program area as follows:

Mechnical and engineering technologies	72.4%
Business, commerce, and data processing technology	24.1%
Health services and paramedical technologies	6.9%
Public service	6.9%
Natural science technology	3.4%

Based on the demographics of respondents, the sample was deemed representative of employers in New York State with potential of hiring post-secondary career graduates.

Individuals responding to the questionnaire held a variety of titles. The frequency of these titles are identified as follows:

Personnel manager	16.2%
Employment manager	9.3%
Personnel representative	6.9%
Personnel administrator	4.6%
Manager college relations	4.6%
Manager human services	4.6%
Employee relations and benefits manager	4.6%
Employee relations	4.6%
Personnel supervisor	4.6%
Personnel associate	2.3%
Technical manager	2.3%
Vice persident personnel	2.3%
Executive vice president	2.3%
President	2.3%
Personnel director	2.3%
Employment supervisor/personnel	2.3%

continued...

Personnel consultant	2.3%
Employment and development manager	2.3%
Director staff services	2.3%
Vice president personnel services	2.3%
Director human resource management	2.3%
Industrial relations manager	2.3%
Director of personnel	2.3%
General manager	2.3%
Employment relations supervisor	2.3%
Other: agent	2.3%

N = 43

Affective skills/characteristics were defined as those competencies other than specific technical skills needed by employees to succeed in technical level positions or jobs that two-year colleges graduates would most likely fill. Toward collecting that data, questions were designed to ascertain which skills were most critical to being hired, retained, and promoted.

Relative to hiring an individual, the important characteristics were identified as follows:

* * * * *

Figure 8: Important Characteristics When Hiring Technical Level Employees

46.5%	*Enthusiasm, motivation, interest*
34.9%	*Communication skills, legible application*
27.9%	*Appearance*
27.9%	*Experience, references, employment history*
27.9%	*Interpersonal/human relations skills, awareness of others*
25.6%	*Knowledge/skills match job, ability to do job*
23.3%	*Attitude*
23.3%	*Self-confidence, maturity, realistic career goals*
11.6%	*Personable/agreeable personality*
6.9%	*Education*

N = 43
(Percentages may not equal 100 due to multiple responses.)

* * * * *

Over 46% of the employers found enthusiasm and motivation as an important characteristic when hiring. The demonstration of skill in communication was identified by over 34%. One noted that a legibly written job application becomes the major first step to being hired. Other characteristics found to be crucial by over 25% related to job skills and ability, interpersonal and human relation skills, the enthusiasm and motivation demonstrated by the candidate, appearance, employment history, experience and references. Over 20% identified education, self-confidence, maturity and attitude. Other characteristics identified less frequently (<6.5%) included:

attends to detail
skill in problem analyses
work ethics
ability/willingness to learn skills
potential contribution
initiative
integrity
diligent
growth potential
sincere
honest
aggressive
stable
adaptable
intelligence
prompt/dependable/reliable

Employers were asked to identify those characteristics considered important when making decisions to retain an employee. Figure 9 summarizes these characteristics by frequency:

* * * * *

Figure 9: Important Characteristics When Retaining Technical Level Employees

53.9%	*Quality of job performance, productivity, work history, type of service, ability*
39.5%	*Dependable, reliable, motivated, enthusiastic, conscientious, prompt, good attendance*
37.2%	*Flexible, adaptable, versatile, ability to learn/assimilate skills, accepts criticism*
34.9%	*Seniority, length of time, job classification*
23.3%	*Self-directed, initiator, accomplishes goals, recognizes own potential, sees potential of other jobs*
16.3%	*Team player, loyal, contributor to organization*
11.6%	*Communication skills*
11.6%	*Attitude*
6.9%	*Interpersonal skills*

N = 43
(Due to multiple responses, percentages do not total 100%.)

* * * * *

The most critical characteristics needed for retention were described as productivity and quality of performance by over 53% of responding employers. Adaptability, flexibility, versatility, ability to learn, dependability and motivation were identified by over 35%. Loyalty was important to over 16%, communication skills and attitude to over 11%. In over a third of the instances, it was noted that seniority determined retention, but affective traits were also important. Other characteristics identified less frequently (2.3%) included:

problem solver
good judgment
tolerates stress
mature
stable

Relative to promotion, several characteristics identified for retention were again identified as essential for promotion, shown in Figure 10.

* * * * *

Figure 10: Important Characteristics for Promoting Technical Level Employees

86.0%	*Job performance, accomplishment, achieve beyond normal, attends to detail, gets job done, versatile, knowledge of operation/job, skill/ability, efficient*
48.8%	*Motivation/ambition, willingness to do more, self-directed, initiator*
48.8%	*Potential for growth, creative, visionary, risk taker, aggressive, function under stress, flexible*
34.9%	*Interpersonal skills, tact, function as a team member*
18.6%	*Leadership, good judgment, skills in decision making*
18.6%	*Loyal/reliable/dependable, dedication, good attendance, company goals*
18.6%	*Communication skills*
11.6%	*Seniority, time in position, experience*
9.3%	*Attitude*

N = 43
(Due to multiple responses, percentages do not equal 100%.)

* * * * *

The most frequently (86%) identified trait was job performance and the quality/quantity of that performance. Over 40% found growth potential, creativity, motivation and self-directness as critical factors. Interpersonal skills were identified by over 34%. Over 18% selected loyalty/reliability, leadership, decision making and communication skills as essential to promotion. Others noted included (5%):

personal career goals
appearance
openings
self-confidence
geographic preference
education

Several of the characteristics were commonly selected as important for hiring, retaining, and promoting. The frequency with which they were identified for each of the processes varied. However, inclusion with all three tasks suggest a core of affective characteristics necessary to be successful as a technical employee. Figure 11 compares these characteristics by task.

Figure 11: Comparison by Task of Selected Characteristics

Hiring		*Retaining*		*Promoting*	
Motivated, self-directed	*46.5%*	*Motivated, self-directed*	*62.8%*	*Motivated, self-directed*	*48.8%*
Communication skill	*34.9%*	*Communication skill*	*11.6%*	*Communication skill*	*18.6%*
Job history	*27.9%*	*Job performance*	*53.9%*	*Job performance*	*86.0%*
Loyalty	*--*	*Loyalty*	*16.3%*	*Loyalty*	*18.6%*
Interpersonal skill	*27.9%*	*Interpersonal skill*	*6.9%*	*Interpersonal skill*	*34.9%*
Growth potential	*--*	*Growth potential*	*37.2%*	*Growth potential*	*48.8%*
Maturity, self-confidence	*23.3%*	*Maturity, self-confidence*	*2.3%*	*Maturity, self-confidence*	*2.3%*
Attitude	*23.3%*	*Attitude*	*11.6%*	*Attitude*	*9.3%*
Seniority	*--*	*Seniority*	*34.9%*	*Seniority*	*11.6%*

Motivation, communication skills, job performance, interpersonal skills, maturity and attitude are important in some degree to hiring, retention and promotion. Growth potential, loyalty and seniority increase with importance once the employee has been hired and is considered for retention or promotion.

Because of interest with the new employee, an item requested five adjectives to describe an ideal new technician. In many instances, the adjectives used echoed those core characteristics identified for hiring, retaining or promoting. Figure 12 lists the five characteristics in order of frequency.

* * * * *

Figure 12: Adjectives Describing Ideal New Employee

48.8% Motivated

34.9% Pleasant personality

27.9% Enthusiastic

25.5% Dependable

23.6% Communicative

23.6% Competent

N = 43
(Due to multiple responses, percentages do not equal 100%.)

* * * * *

Both communicative and competent were identified by the same percentage of responding employers, thus both are included in the listing.

Employers were also asked to share their major complaint of newly hired technical employees. The greatest number of employers (41.9%) indicated unrealistic expectations and over-confidence as main complaints. Lack of interpersonal and human relations skills were cited by 18.6%, poor communications by 16.3%, lack of flexibility and career goals by 6.9%.

Less than 3% indicated no complaints.

The six characteristics necessary for hiring, retention and promotion may be identified as those affective characteristics needed by technical employers to experience successful employment. This indication is furthered when job areas represented by responding employees are viewed in terms of program classification. Respondents were asked to identify the type of job for which they were answering questionnaire items, and also to indicate the existence of responsibility for other positions. Responses are categorized to program area as follows:

Program Area	Responding to Job	Responsible for Other Jobs
Business, Commerce, Data Processing	24.1%	47.6%
Mechanical and Engineering Technology	72.4%	28.5%
Health Services and Paramedical Technology	6.9%	9.5%
Public Service	6.9%	9.5%
Natural Science Technology	3.4%	4.7%

Employers were also asked the extent to which the identified qualities would change for other positions. It was indicated by the 63.1% with other types of employees under their responsibility that responses would not change significantly. Noted changes were related to changes in skill level or requirement that might be necessitated by a higher level position. Given these reactions, it appears that the characteristics identified are applicable to graduates in all areas including business and technological areas.

This assumption is further strengthened by an apparent consensus

reached by employers regarding affective characteristics. There appeared to be little distinction in the type of skills required at a small versus a large agency or in a manufacturing versus a service agency. The identified skills also appear to reflect those found by other previously noted research efforts. In addition, the characteristics identified reflect those set as clusters for the Affective Work Competencies Inventory. Thus, it appears that the domain of the instrument has application for postsecondary but the format is less appropriate. These observations are suggestive only since any definitive statements would require further specification and more in-depth investigation.

C. Comparing Employer - Employee Perspectives

As part of the pilot study, employees were asked to identify those characteristics that they perceived employers used in hiring, retaining, and promoting decisions. Their responses are summed in Figure 13 as follows:

* * * * *

Figure 13: Workers' Designation of Necessary Characteristics

Hire		*Retain*		*Promote*	
21.4%	*Education*	*21.4%*	*Technical ability and complete assignment*	*7.6%*	*Ability to get job done*
14.2%	*Knowledge of job & technical ability*	*14.2%*	*Performance*	*7.6%*	*Ability and speed*
14.2%	*Experience*	*7.1%*	*Speed & accuracy*	*7.6%*	*How much you know and apply*
7.1%	*Ability to get job done*	*7.1%*	*Need for your skills*	*7.6%*	*A decreased need for supervision*
7.1%	*Interview impression*	*7.1%*	*Hard work*	*7.6%*	*Production*
7.1%	*Experience & attitude*	*7.1%*	*Job performance*	*7.6%*	*Knowledge & skill*
7.1%	*High school/ college skills*	*7.1%*	*Contribution to project*	*7.6%*	*Work done above the level of responsibility*

Figure 13 (continued):

Hire		*Retain*		*Promote*	
7.1%	*Experience & self-confidence*	7.1%	*Experience*	7.6%	*Decision making & interpersonal skills*
7.1%	*Training & experience*	7.1%	*Dependable & get job done*	7.6%	*Performance & higher education*
		7.1%	*Personality*	7.6%	*Word record*
				7.6%	*Leadership*
				7.6%	*Job performance, education & experience*
				7.6%	*Skills*

N = 15

* * * * *

For hiring purposes, workers identified experience and education as most critical. For retaining, employees identified ability, competent performance and dependability. For promotion a range of characteristics were identified, including ability to accomplish a job, decreased need for supervision of work beyond responsibility, quality of job performance, exhibition of leadership skills and desire to improve through higher education. Generally employees were more apt to agree on the characteristics that would help one attain and hold a job but less on how to acquire promotion.

Although the sources of data do not allow specific comparison of employee and employer perception, it can be noted that items identified by employees in the pilot study as most essential in the hiring process are not given the same import by employers generally. There appears to be greater agreement in perception regarding retainment and promotion. It is interesting, even while acknowledging the limitations of this comparison, that interpersonal skills and communication skills viewed as critical by employers do not carry the same priority in the employee listings.

III. Summary and Implications

This feasibility study has a two-fold purpose of a) determining the applicability of the Affective Work Competencies Inventory for use at the postsecondary level, and b) to determine affective characteristic/competencies critical to employment success, in particular to hiring, retaining and promotion processes.

As a result of consultations with project ad hoc advisors, the original AWCI was revised in order to reduce the number of items and eliminate those items found inappropriate to technical level employees. The revision was based on input by employers, two-year college personnel and test/measurement consultant. The revised version of the instrument was used in a pilot study resulting in data for selected analysis of the instrument. Based on these analyses, the following are indicated:

- The 26 items constituting the revised version may serve as a preliminary base for evaluating affective characteristics since they appear to be tapping behaviors associated with successful employment.
- Based on available data some degree of reliability can be anticipated.
- Based on the extent of significant inter-item and inter-cluster correlations, it is recommended that the instrument not be considered in an item-cluster structure since clusters offer little discrimination.
- It is recommended that consideration be given to reduction of scale range in any future efforts.
- Based on mean and median, it appears that punctuality, safety, responsibility, pride and helping others are associated with employee success to a greater extent than items dealing with awareness of the workplace and planning/skill development.

In order to obtain employer input regarding those affective characteristics essential to hiring, retaining and promoting, a mail survey to a sample of employers likely to hire two-year college graduates was undertaken. Survey results indicated that when hiring technical level employees, the

most wanted affective characteristics were motivation, interest and enthusiasm; followed closely by skills in communication, appearance, an apparent awareness of others, and necessary knowledge/skills to match job requirements.

For continued employment, critical affective competencies included quality of job performance, productivity, dependability, reliability, and continued motivation/enthusiasm. Flexibility, versatility and ability to learn were also important to retention decisions. Seniority or length of time in the position were considered factors even though it was acknowledged that this criterion was not an affective characteristic.

When viewing the three procedures and identified characteristics within each, it becomes possible to isolate motivation, communication skills, job performance, interpersonal skills, maturity and attitude as six affective competencies necessary for successful employment in a technical level position. These six competencies compare favorably to those identified in other states and in other research studies. As in those other studies no attempt was made to reach a specific definition of terms but rather accept the common usage of these terms. The five adjectives describing an ideal new employee again reflected motivation, pleasant personality, enthusiasm, dependability, communicativeness and competency.

Although the data source did not allow specific comparisons of employee and employer perceptions of needed affective skills, an informal comparison indicated that employees are more likely to identify experience and education as critical to employment success than are employers.

Postsecondary occupational educators should find interest in the desired affective competencies and determine how they might relate to

respective program areas. Many of the identified skills reflect those currently under consideration as part of the futuring process, thus over time, should gain greater emphasis as the effort is broadened. Meanwhile, daily instructional processes may emphasize activities that are designed to increase the ability of students to interact with others and assume responsibilities toward study found most challenging by each individual.

In general, the Affective Work Competency Inventory as originally designed appears appropriate in domain for technical workers. However, the format does not appear usable, and in many instances unacceptable, to distribution through an employer. Any instrument designed to test affective competencies would have to be extremely brief and not place an employer or employee in a position requesting assessment not based on evidence of performance or evidence required by the employing agency. There is apparent little difficulty obtaining information and reactions regarding skills or competencies as long as the information is not linked to individual employees. Because of union and agency policies, these kinds of assessments are not readily given, perhaps not given at all to an outside agency, without careful planning and understanding of purpose.

If interest in development of an instrument to measure affective dimensions continues, it would appear from responses received that such an instrument would be possible if the effort was extensive, allowing for a period of time to carefully build rapport with and gain the trust of any agency asked to participate. Such an effort would need to be more extensive than this feasibility study. The experience of this effort has indicated that the premise of using an already developed instrument should not be anticipated.

An alternate strategy might be to seek input of potential technologists prior to graduation leading toward the eventuality of contacting them

directly once employed. There is some sense from previous experiences that if employees accept the research agency prior to graduation, they remain willing to provide feedback requested. This would eliminate the necessity of going through an employing agency functioning within organizational and union policies. However, such an alternative eliminates the potential of obtaining employer input thereby resulting in but half of the data sought.

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AFFECTIVE WORK COMPETENCIES INVENTORY

by H. C. Kazanas and D. P. Beach

Form B

DIRECTIONS: Circle the number that most clearly represents your work behavior.

SAMPLE: WHILE I AM AT WORK, I: Follow directions 1 2 3 4 5 6 7

If you never follow directions, you would circle 1. If you follow directions only half the time, you would circle 4.

THERE ARE NO RIGHT OR WRONG ANSWERS. Please answer the questions as honestly as you can. As you read each sentence, think about how you act when you're on the job, and circle the number that best fits.

WHILE I AM AT WORK, I:	NEVER ALWAYS
1. Develop new skills to get promoted.	1 2 3 4 5 6 7
2. Help others work together.	1 2 3 4 5 6 7
3. Make changes so I don't make mistakes.	1 2 3 4 5 6 7
4. Make decisions without help.	1 2 3 4 5 6 7
5. Check my work to be sure it's right.	1 2 3 4 5 6 7
6. Work cheerfully.	1 2 3 4 5 6 7
7. Follow all directions step by step.	1 2 3 4 5 6 7
8. Follow safety rules.	1 2 3 4 5 6 7
9. Take care of equipment & leave workplace neat.	1 2 3 4 5 6 7
10. Control my temper.	1 2 3 4 5 6 7
11. Finish my work even if it's boring.	1 2 3 4 5 6 7
12. Keep equipment & materials in order.	1 2 3 4 5 6 7
13. Finish my work on time.	1 2 3 4 5 6 7
14. Plan my work for the day.	1 2 3 4 5 6 7
15. Do what I am assigned.	1 2 3 4 5 6 7
16. Leave my work for others to do.	1 2 3 4 5 6 7
17. Help others when they need it.	1 2 3 4 5 6 7
18. Adjust to changes.	1 2 3 4 5 6 7
19. Have to be reminded to begin work.	1 2 3 4 5 6 7
20. Check my work after corrections.	1 2 3 4 5 6 7
21. Complain about my job.	1 2 3 4 5 6 7
22. Do not follow directions.	1 2 3 4 5 6 7
23. Do not pay attention to what I'm doing.	1 2 3 4 5 6 7
24. Interrupt others.	1 2 3 4 5 6 7
25. Look at all sides of a problem.	1 2 3 4 5 6 7
26. Get mad at co-workers when they are slower than me.	1 2 3 4 5 6 7
27. Follow a daily schedule.	1 2 3 4 5 6 7
28. Carry out instructions.	1 2 3 4 5 6 7
29. Work faster to finish my work.	1 2 3 4 5 6 7
30. Avoid work.	1 2 3 4 5 6 7
31. Set my own work goals.	1 2 3 4 5 6 7
32. Join in group activities.	1 2 3 4 5 6 7
33. Plan work to fit the time I have.	1 2 3 4 5 6 7
34. Make decisions without help.	1 2 3 4 5 6 7
35. Avoid errors.	1 2 3 4 5 6 7
36. Complain.	1 2 3 4 5 6 7
37. Follow rules.	1 2 3 4 5 6 7
38. Pay no attention to unsafe work areas.	1 2 3 4 5 6 7
39. Bother others while they are working.	1 2 3 4 5 6 7
40. Stay calm.	1 2 3 4 5 6 7
41. Complete what I start.	1 2 3 4 5 6 7
42. Plan what I will do for the day.	1 2 3 4 5 6 7
43. Start work on time.	1 2 3 4 5 6 7
44. Suggest how to save time.	1 2 3 4 5 6 7
45. Get bored with what I am doing.	1 2 3 4 5 6 7
46. Set goals to do a better job.	1 2 3 4 5 6 7
47. Help new workers.	1 2 3 4 5 6 7
48. Adjust to various work situations.	1 2 3 4 5 6 7
49. Work without supervision.	1 2 3 4 5 6 7

Please continue on the back page.

Grade or Occupation _____ Date _____

School or Firm _____ Address _____

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WHILE I AM AT WORK, I:	NEVER						ALWAYS
50. Keep good and complete records	1	2	3	4	5	6	7
51. Say nice things about other people.	1	2	3	4	5	6	7
52. Follow directions.	1	2	3	4	5	6	7
53. Use safety equipment & clothing.	1	2	3	4	5	6	7
54. Damage other people's property.	1	2	3	4	5	6	7
55. Get angry.	1	2	3	4	5	6	7
56. Make corrections without complaining.	1	2	3	4	5	6	7
57. Keep my work area clean.	1	2	3	4	5	6	7
58. Say that I will do something, and then I don't do it.	1	2	3	4	5	6	7
59. Suggest ways to save effort.	1	2	3	4	5	6	7
60. Look out the window or at the clock.	1	2	3	4	5	6	7
61. Accept new training.	1	2	3	4	5	6	7
62. Work well in a group.	1	2	3	4	5	6	7
63. Get along with new workers and supervisors.	1	2	3	4	5	6	7
64. Complete my work without supervision.	1	2	3	4	5	6	7
65. Get mad at other workers.	1	2	3	4	5	6	7
66. Listen to instructions.	1	2	3	4	5	6	7
67. Have safe work habits.	1	2	3	4	5	6	7
68. Talk out of turn at group meetings.	1	2	3	4	5	6	7
69. Stay angry or upset all day.	1	2	3	4	5	6	7
70. Finish difficult tasks.	1	2	3	4	5	6	7
71. Put equipment and materials back where they belong.	1	2	3	4	5	6	7
72. Am late for meetings.	1	2	3	4	5	6	7
73. Suggest ways to save materials.	1	2	3	4	5	6	7

WHILE I AM AT WORK, I:	NEVER						ALWAYS
74. Argue about what I am told to do.	1	2	3	4	5	6	7
75. Accept hard assignments.	1	2	3	4	5	6	7
76. Make suggestions.	1	2	3	4	5	6	7
77. Adjust to change.	1	2	3	4	5	6	7
78. Answer co-workers cheerfully.	1	2	3	4	5	6	7
79. Read directions.	1	2	3	4	5	6	7
80. Keep work area neat & clean.	1	2	3	4	5	6	7
81. Bother other people.	1	2	3	4	5	6	7
82. "Blow my Stack."	1	2	3	4	5	6	7
83. Keep my records & files in order.	1	2	3	4	5	6	7
84. Try to do more than I have to do.	1	2	3	4	5	6	7
85. Am proud of the work I do.	1	2	3	4	5	5	7
86. Work hard to reach new goals.	1	2	3	4	5	6	7
87. Report unsafe working conditions.	1	2	3	4	5	6	7
88. Plan my work for the day.	1	2	3	4	5	6	7
89. Work harder when I run into troubles.	1	2	3	4	5	6	7
90. Work hard only when someone is watching me.	1	2	3	4	5	6	7
91. Am careful near dangerous work areas.	1	2	3	4	5	6	7
92. Keep my supplies in order.	1	2	3	4	5	6	7
93. Look forward to new assignments.	1	2	3	4	5	6	7
94. Complain about what I have to do.	1	2	3	4	5	6	7
95. Am happy doing my job.	1	2	3	4	5	6	7

THANK YOU FOR YOUR PARTICIPATION IN COMPLETING THIS INVENTORY.

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SUPERVISORY RANKING FORM

NAME _____ DATE _____

Company _____ Position _____

# of employees under your supervision _____ # of employees now taking the AWCI _____

Who among your workers is the most cooperative?

_____

_____

_____

_____

Which employees are the most dependable?

_____

_____

_____

_____

List the employees who are the most efficient:

_____

_____

_____

_____

Which workers are the best at following directions?

_____

_____

_____

_____

AFFECTIVE WORK COMPETENCIES INVENTORY - Short Form Appendix B

(Authors: N. C. Kavanas & D. P. Beach)

Two-Year College Development Center
State University of New York at Albany

Spring 1984

DIRECTIONS: Please circle the number on the 7-point scale (1=never, 7=always) that best represents your work behavior for items 1-26. The last question seeks your opinion. There are no right or wrong answers. Please return the completed form in the enclosed self-addressed envelope directly to us. Thank you in advance.

Title of position: _____ ☐ *Female*

College attended: _____ ☐ *Male*

WHILE I AM AT WORK, I:	NEVER						ALWAYS
1. Develop new skills to get promoted.	1	2	3	4	5	6	7
2. Make changes so I don't make mistakes.	1	2	3	4	5	6	7
3. Make decisions without help.	1	2	3	4	5	6	7
4. Check my work to be sure it's right.	1	2	3	4	5	6	7
5. Follow all directions step by step.	1	2	3	4	5	6	7
6. Follow safety rules.	1	2	3	4	5	6	7
7. Report unsafe working conditions	1	2	3	4	5	6	7
8. Look at all sides of a problem.	1	2	3	4	5	6	7
9. Plan my work for the day.	1	2	3	4	5	6	7
10. Put equipment and materials back where they belong.	1	2	3	4	5	6	7
11. Am proud of the work I do.	1	2	3	4	5	6	7
12. Set my own work goals.	1	2	3	4	5	6	7
13. Complete what I start.	1	2	3	4	5	6	7
14. Start work on time.	1	2	3	4	5	6	7
15. Suggest how to save time/effort.	1	2	3	4	5	6	7
16. Adjust to various work situations.	1	2	3	4	5	6	7
17. Work without supervision.	1	2	3	4	5	6	7
18. Keep good and complete records.	1	2	3	4	5	6	7
19. Listen to instructions.	1	2	3	4	5	6	7
20. Take care of equipment and leave workplace neat.	1	2	3	4	5	6	7
21. Help others when they need it.	1	2	3	4	5	6	7
22. Finish my work on time.	1	2	3	4	5	6	7
23. Keep my records and files in order.	1	2	3	4	5	6	7
24. Keep my supplies in order.	1	2	3	4	5	6	7
25. Look forward to new assignments.	1	2	3	4	5	6	7
26. Help new workers.	1	2	3	4	5	6	7

27. What single characteristic do you feel was most important to the employer when they decided to:

hire you - _____

retain you - _____

promote you - _____

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Appendix C

EMPLOYER SURVEY - Affective Work Competencies

Two-Year College Development Center
State University of New York at Albany

Spring 1984

Name: _____

Position of person responding: _____

Company/Agency: _____

Number of employees: _____

Type of company:

____construction
____manufacturing
____wholesaling
____retail
____service
____transportation
____finance
____agriculture
____other; please specify: _____

DIRECTIONS: We are seeking to identify affective skills and characteristics (other than technical job skills) which are important to job success of employees in technical positions (jobs that two-year college graduates most likely hold). Please help us by completing the following questions.

1. *What are the three most important characteristics you look for when each of the following decisions are made:*

   a) *hiring an individual:*

      1) _____

      2) _____

      3) _____

   b) *retaining (versus laying off) an employee:*

      1) _____

      2) _____

      3) _____

   c) *promoting an employee:*

      1) _____

      2) _____

      3) _____

2a. *In your opinion, what <u>five</u> adjectives (or brief phrases) best describe an <u>ideal</u> new employee?*

1) _____

2) _____

3) _____

4) _____

5) _____

b. *What major complaint do you have regarding newly-hired employees in technical level positions?*

_____

_____

_____

3a. *In answering the previous two questions, what <u>specific</u> technical level <u>position</u> did you have in mind? (Briefly describe.)*

_____

_____

_____

b. *Do you employ other types of technical level positions?*

____ *Yes, please identify:* _____

____ *No* _____

If <u>yes</u>, how would your answers change for any of the above positions?

_____

_____

_____

Thank you for your cooperation.

Please return as soon as possible but no later than June 15 to:

Dr. LaVerna M. Fadale
Project Director
Two-Year College Development Center
SUNY-Albany
135 Western Avenue, Draper 306
Albany, New York 12222

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